

# XoWiki

Towards a Generic Tool for Web 2.0  
Applications and Social Software

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## Overview

- Basic Ideas
- Towards Web 2.0
- New Features
- Virtual Presence
- Collaboration Proxies
- Summary



## Basic idea

- **DotLRN Conference Boston:**

XoWiki =

Wiki + Content Management  
+ Dynamic Page Fragments =  
*Basic Web Application*

- **Basic Web Application**

+ Syndication  
+ Social Software Support =  
*Basic Web 2.0 Application*

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## What's new in XoWiki since Boston (1)

- **Improved Video-Support**

- Podcasts
  - New page type: `::xowiki::PodcastItem`
  - More Metadata
  - Customized RSS with iTunes markup

- Flash Support
  - Easy inclusion of Flash content via

```
[[swf:mymovie.swf|This is a pretty movie...|-quality high]]
```

- **Import/Export of Files**

- Export the contents of an XoWiki instance into a text-file that can be imported into another instance
- Export contains now `::xowiki::File` and its subtypes (images, podcasts, flash files, ...)
- Mirroring possible

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# What's new in XoWiki since Boston (2)

- **Page order**
  - Define ordering of pages (like sections in a book)
  - Additional attribute for every page type
  - Implemented with the PostgreSQL Itree module
- **Book-Style**
  - Special page template to browse through a book, page by page
  - Automatic table of contents (YUI Tree TreeView)
  - Page content fades in and out via AJAX (YUI animation)
  - Example: <http://www.openacs.org/test-doc/>
- **Whole Book as Page**
  - XoWiki prototype page `book.page`
  - Table of contents points to anchors within page
  - Every section can be separately edited
  - Convenient for incremental search (Firefox) or printing
  - Example: <http://oacs-dotlrn-conf2007.wu-wien.ac.at/>

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# Page-Order: Page by Page

The screenshot shows a XoWiki page with a navigation menu on the left and a main content area on the right. The navigation menu includes sections like '1 Introduction', '2 Page Types', '3 Directories', '4 Editing', '5 Different Types of Pages', '6 XoWiki Configuration', '7 Syndication', and 'A Credits'. The main content area is titled '4.1.4 Typed Links' and contains the following text:

XoWiki supports as well an experimental feature of **typed links**, where a user can define any kind of relations to other wiki pages, such as inter- or intra-wiki-page links. In general, this could for example be used to inter-term relations (e.g. synonym, hypernym, antonym, ...) in a dictionary, or similar other usages. The type of the link is specified before the (optional) language prefix. We use the following syntax.

```
[[link_type?:?lang:?name?/link_label?]]
```

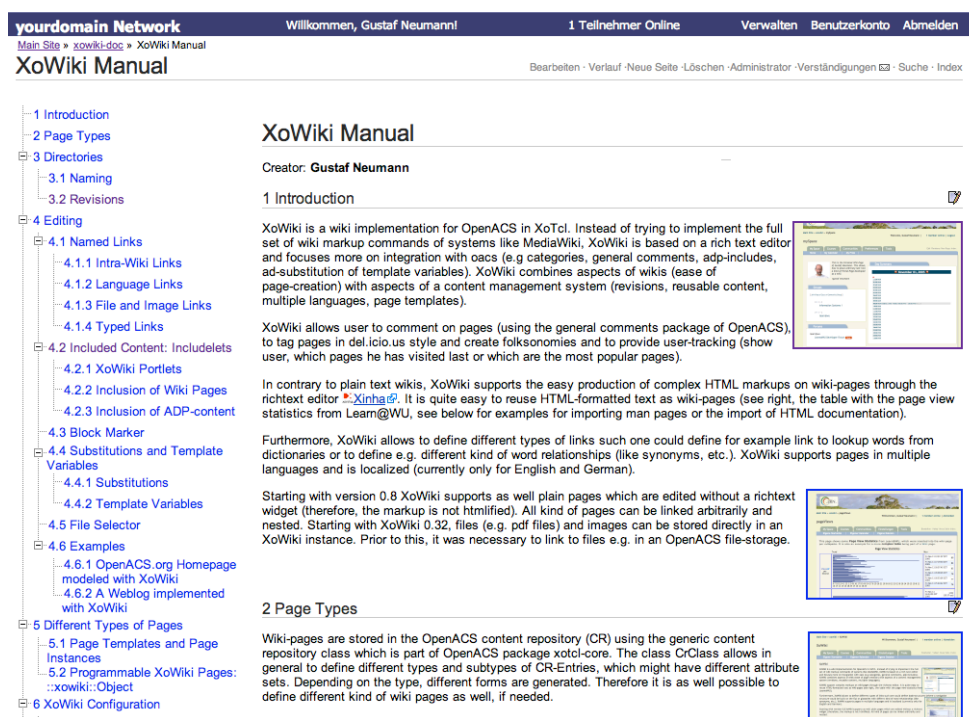
When a new link type is defined it is possible to define the link resolver and a renderer of this link type by subclassing the class `::xowiki::Link`. XoWiki 0.24 comes with a sample implementation of link type glossary. In this implementation, a glossary is a separate xowiki instance (named `glossary`), which contains the word definitions. Every xowiki instance can refer to this glossary and link to this words. The text shown on the right side contains for example a typed link for PostgreSQL, which is defined as:

```
The [[glossary:PostgreSQL]] Global Development Group ...
```

In order to resolve the term, xowiki uses a link-specific resolver that locates an instance named `glossary`. It looks in the site nodes for sister-nodes of the xowiki instance and then for sister nodes in its parent node and so on. When the resolver can locate the xowiki instance and the entry for PostgreSQL, it renders the entry with a special symbol (see screenshot). If the resolver finds the xowiki instance, but not the word, it sets the link on the square bracket to add a dictionary definition in the glossary. When this link is activated it displays the xowiki entry in a popup window. The XoWiki-page from the glossary is retrieved via an AJAX call in the background (tested on Firefox, Safari and IE).

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# Page-Order: All Pages in one Document



**yourdomain Network** Willkommen, Gustaf Neumann! 1 Teilnehmer Online Verwalten Benutzerkonto Abmelden

Main Site » xowiki-doc » XoWiki Manual  
**XoWiki Manual** Bearbeiten · Verlauf · Neue Seite · Löschen · Administrator · Verständigungen ☰ · Suche · Index

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 4 Editing  
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**XoWiki Manual**  
 Creator: **Gustaf Neumann**

1 Introduction

XoWiki is a wiki implementation for OpenACS in XoTcl. Instead of trying to implement the full set of wiki markup commands of systems like MediaWiki, XoWiki is based on a rich text editor and focuses more on integration with oacs (e.g categories, general comments, adp-include, ad-substitution of template variables). XoWiki combines aspects of wikis (ease of page-creation) with aspects of a content management system (revisions, reusable content, multiple languages, page templates).

XoWiki allows user to comment on pages (using the general comments package of OpenACS), to tag pages in del.icio.us style and create folksonomies and to provide user-tracking (show user, which pages he has visited last or which are the most popular pages).

In contrary to plain text wikis, XoWiki supports the easy production of complex HTML markups on wiki-pages through the richtext editor [Xinha](#). It is quite easy to reuse HTML-formatted text as wiki-pages (see right, the table with the page view statistics from Learn@WU, see below for examples for importing man pages or the import of HTML documentation).

Furthermore, XoWiki allows to define different types of links such one could define for example link to lookup words from dictionaries or to define e.g. different kind of word relationships (like synonyms, etc.). XoWiki supports pages in multiple languages and is localized (currently only for English and German).

Starting with version 0.8 XoWiki supports as well plain pages which are edited without a richtext widget (therefore, the markup is not htmlified). All kind of pages can be linked arbitrarily and nested. Starting with XoWiki 0.32, files (e.g. pdf files) and images can be stored directly in an XoWiki instance. Prior to this, it was necessary to link to files e.g. in an OpenACS file-storage.




2 Page Types

Wiki-pages are stored in the OpenACS content repository (CR) using the generic content repository class which is part of OpenACS package xotcl-core. The class CrClass allows in general to define different types and subtypes of CR-Entries, which might have different attribute sets. Depending on the type, different forms are generated. Therefore it is as well possible to define different kind of wiki pages as well, if needed.

The definition of the stored content: Page Class is defined by the content specification

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# What's new in XoWiki since Boston (3)

- **Page States**
    - Distinguish between pages under **production** and pages which are **ready** for usage
    - Pages under production are not listed in aggregating includelets (e.g. what's new, ...), syndication, ...
    - "production" / "ready"
  - **Auto-naming of pages**
    - Auto-naming configurable via package parameter
    - Easy means to create a News (or Announcements) application as XoWiki Instance
- 


- **Google Site Map, Syndication Buttons**
  - **Virtual Presence and Social Proxies (next slides)**

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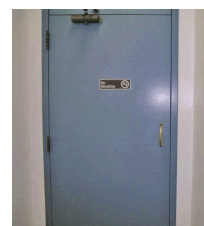
# Virtual Presence

- To **“use the system”** vs. to **“be in the system”**
- To **“use the system”**
  - “Users” outside of the system interact with the system
  - Nobody cares, what the user does with the system
  - System = Appliance
  - Universe of Discourse: 1 user, 1 system
- To **“be in the system”**
  - “Users” are visible in the system for other users
  - Users are people being watched, leave traces and artifacts
  - System = Room
  - Universe of Discourse: People meet over the system other people
  - Software as a social facilitator
  - Human awareness
- **Virtual Presence**
  - System shows, who is online, in which room, ...

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# Human Awareness / Social Intelligence

- Tom Erickson (IBM Research): The Tale of the Two Doors
- **Case:**
  - Business building, busy hallway, stairway from the Cafeteria,
  - Connecting door
  - Lunchtime: People with Trays bringing Lunch to their offices
  - When door opens quickly at the wrong moment: Messy Accidents
- **Solution 1:**
  - Sign: “Open Door Slowly”
  - No big effect
- **Solution 2:**
  - Window in the Door
    - Window makes the Person on the other side visible
    - Effect on the social norms (Don't slam things into other people)
    - People know that they are seen from the other side and held accountable for their behavior



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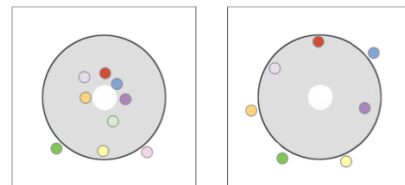
# Watching and Being Watched

- Watching ...
  - draw attention to people
  - enables to be aware of the social context
  
- ... Being Watched
  - Mutual visibility, reciprocity is important
  - Eye contact
  
- Face-to-Face behavior
  - ... different from behavior in unobserved situations
  - ... is governed by social norms,
  - which are governed by **environmental cues** =
    - Physical cues and
    - Behavioral cues

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# Environmental Cues

- Physical Proxies
  - Identifying Individuals
    - Not a question of strong authentication, but **identity**
    - Personal Proxies
  - Identifying Things and Places
  
- Social Proxies
  - Identifying social behavior
  
- Media Richness of Proxies
  - High Media Richness  
(3D Worlds with avatars)
  
  - Low Media Richness:  
e.g Tom Erickson's Babble  
Social Proxy for Chat



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## Web 1.0

“Watching the Internet”




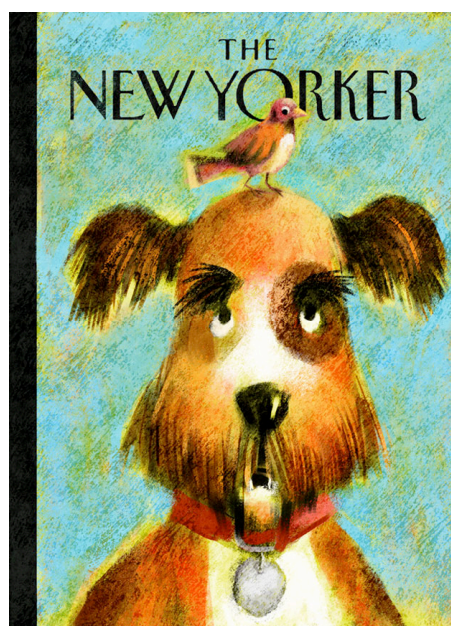
“On the Internet, nobody knows you’re a dog.”

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## Web 2.0

■ “Being Member of the Internet Community”

- Individuals leaving traces in the Internet
- Blogs
- Google Scholar
- Ohloh 
- Ratings
- ...



ID

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# XoWiki Support for Virtual Presence

## ■ Strong Reciprocity

- People can't see you, if you don't see them (virtual "eye contact")
- Different presentation depending on the login state of the watching user
- Anonymous users see just a summary

## ■ Presence includelet:

- Display, which users have visited an XoWiki artifact within a specified time interval
- Artifacts: *XoWiki Instance* or *XoWiki Page*
- Time Span e.g. "30 minutes" or "14 days"
- Example: `{{presence -interval "1 day" -page "this"}}`

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# XoWiki Collaboration Proxies

## ■ Collaboration Graphs

- Strong Reciprocity
- Basis: analysis of the [revisions](#) of Wiki Pages
- Everybody, who can see [revisions](#), can see analysis of revisions
- Assumption: People collaborate, if they edit the same page
- All graphs are computed on the fly

## ■ Activity Graph

- Visualize, what happened recently (who did last n page revisions)
- Who is currently working together

## ■ Personal Collaboration View

- Visualize, who edited the same pages a person has edited
- Different per user

## ■ Personal Contribution History

- Visualize, what a person has contributed to a Wiki instance
- Items and revisions

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# XoWiki Activity View

OpenACS News • Forums • Community • Wiki • Bugs • Documentation • Download

The Toolkit for Online Communities 11315 Community Members, 2 members online Log Out logged in as Gustaf Neumann Search

Activity Graph  
OpenACS Home : xowiki : Activity Graph Edit · Revisions · New Page · Delete · Admin · Notifications Search · Index

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Collaborations in last 200 activities by 16 Users in this wiki

DotLRN Zen Project

2 registered users in community xowiki in last 30 minutes  
Gustaf Neumann 1 minute ago  
Torben Brosten 1 minute ago

Contributors

OpenACS.org  
HOME  
News

Visualization: Value-added version of JavaScript graph drawer of Aslak Hellesøy and Dave Hoover (MIT-style license)

# XoWiki Personal Collaboration Graph

OpenACS News • Forums • Community • Wiki • Bugs • Documentation • Download

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Collaboration Graph  
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Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Collaboration Graph for Gustaf Neumann in this wiki(248 contributions)

Me

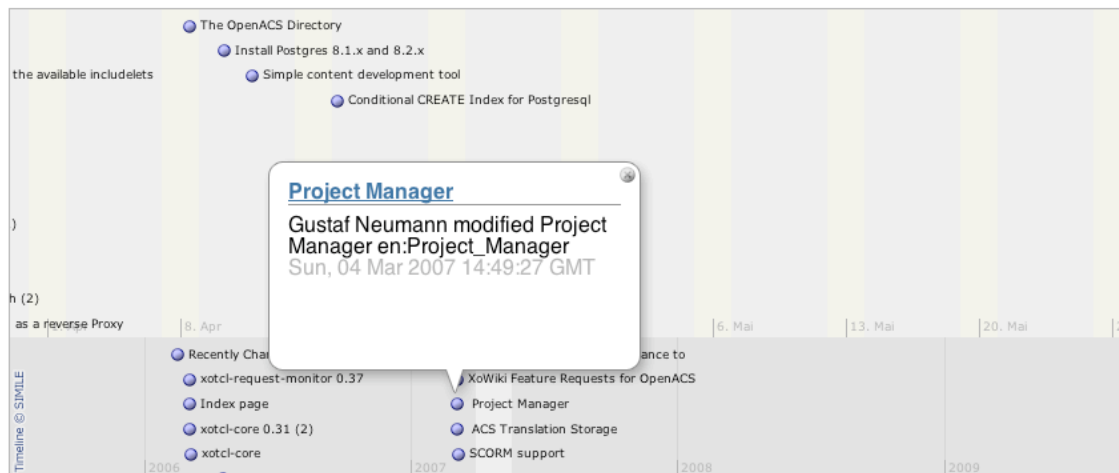
2 registered users in community xowiki in last 30 minutes  
Gustaf Neumann 1 minute ago  
Torben Brosten 3 minutes ago

Contributors

OpenACS.org  
HOME  
News  
Community  
Directory - Who's Who  
Documentation  
Open ACS Projects



# XoWiki Personal Contribution History



Based on timeline.js from SMILE Project  
(Semantic Interoperability of Metadata and Information in unLike Environments)

<http://simile.mit.edu/> (MIT style license)

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## Personal Collaboration View and Contribution History on one Wiki page

- Sample Page with Two includelets

```
{{collab-graph}}  
{{user-timeline -interval1 WEEK -interval2 YEAR}}
```

- Parametrization:

- ```
{{collab-graph -max_edges 70 -cutoff 0.1  
-show_anonymous message  
-user_id}}
```
- ```
{{user-timeline -user_id -data timeline-data  
-interval1 DAY  
-interval2 MONTH}}
```

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## Summary

- XoWiki as a “Swiss Knife” for small Web-Applications
- More than just a Wiki
- High Reuse through Inheritance
  - Search, notifications, categories, tags, RSS, syndication buttons, weblog-style, import/export, virtual presence, collaboration graphs ... for all kind of XoWiki pages and instances
- Various E-Learning scenarios possible
  - Raise awareness of individual and social behavior